

(iv) Full Employment

Classical Economics assumes that an economy tends towards full employment in the long run. Full employment is defined as the level of employment where all available resources are utilized efficiently and there is no involuntary unemployment. This assumption is based on the idea that wages and prices adjust to ensure that labor and other resources are fully employed.

Implication for output, prices, and Employment^{nt}

- **Output:-** At full employment output is maximised given the available resources and technology. This is considered the economy's natural level of output.
- **Prices:-** Full employment leads to stable prices as there are no significant pressures on supply or demand that would cause prolonged inflation or deflation.
- **Employment:-** In the classical model, unemployment is considered to be frictional or voluntary and the economy is always moving towards full employment as market adjustments occur.

Q-8 Explain the concept of value added with an example.

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Value added refers to the increase in the value of a product at each stage of production. It is the difference between the value of concept and the value of intermediate goods used in production. The concept helps avoid double in national income accounting. For example, If a baker buys flour for ₹20 and sells bread for ₹50, the value added by the baker is ₹30. The ₹30 includes wages, rent, profit and other inputs. When calculating GDP, only the value added at each stage is included, not the total sales value, ensuring accurate measurement of economy activity.

Q-2 Derive IS and LM curves. How does an economy achieve equilibrium in both real sector and monetary sector?

- The IS-LM model (Investment-savings and Liquidity Preference-Money supply) is a fundamental tool in macroeconomics to demonstrate how a economy achieves equilibrium in both the real sector and the monetary sector. The IS curve represent equilibrium in the real sector where output (GDP) is determined by the equality of investment and saving. The LM curve represent equilibrium in the monetary sector where money demand equals money supply.

Derivation of the IS Curve:-

The IS curve is derived from the equilibrium condition in the goods ~~and~~ markets, where total output (Y) equals total demands ($C+I+G$) Here.

- C is a consumption, which depend positively on income (Y): $C = C_0 + cY$
- I is investment, which depend negatively on the interest rate (r): $I = I_0 - b_r$
- G is a government expenditure (assumed exogenous)

(iv) Net Exports (NX): Exports minus imports it represents foreign demand for domestic goods minus domestic demand for foreign goods.

Mathematically: $AD = C + I + G + NX$

In the Keynesian model, an economy achieves equilibrium when aggregate demand equals aggregate output (Y) that is:

$$Y = AD = C + I + G + NX$$

If aggregate demand is greater than output firms experience unintended inventory reduction and increase production raising output and income. If aggregate demand is less than output, firms accumulate excess inventory and cut back production lowering output and income.

This adjustment continues until the economy reaches an output level where planned spending equals actual output. Unlike classical models, the Keynesian model allows for equilibrium below full employment below full employment meaning the economy can be in equilibrium, meaning the economy can be in equilibrium with ~~unemployment~~ unemployment justifying the need for active fiscal and monetary policy.

Assignment - I

Q-1 Bring out the salient features of an economy as suggested by classical economics. What are its implications with respect to output, prices and employment?

Ans Salient Features of an Economy According to Classical Economists

The classical economic theory, which emerged in the late 18th and early 19th centuries, provides foundational insights into the functioning of an economy. The classical economists, including Adam Smith, David Ricardo, Thomas Malthus, and James Mill, emphasized certain key features of an economy that have significant implications for output, prices, and employment.

(i) Self-Regulating Markets —

Classical economics believed in the concept of self-regulating markets. They posited that economies are capable of achieving equilibrium through the forces of supply and demand without the need for government intervention. According to this view, if there is a surplus of goods

Q-4 Explain how equilibrium level of output is determined in the Keynesian model.

Ans In the Keynesian model, the equilibrium level of output is determined where aggregate demand (AD) equals aggregate output (Y). This is the point where the total spending in the economy matches the total production of goods and services.

Aggregate demand (AD) in a simple Keynesian model consists of four components.

$$AD = C + I + G + NX.$$

Where C is consumption, I is investment, G is government spending, and NX is net exports.

In a two-sector model (closed economy with no government or foreign trade), AD is simplified to

$$AD = C + I$$

Consumption depends on income and is expressed as

$$C = C_0 + cY$$

Where C_0 is autonomous consumption and c is the marginal propensity to consume (MPC).

Assignment II

Q-3 What are the components of aggregate demand in the Keynesian model? Explain how an economy achieves equilibrium in the the Keynesian model.

Components of Aggregate Demand in the Keynesian Model.

- In the Keynesian model, aggregate demand (AD) represents the total demand for goods and services in a economy at a given Price level. It consists of four main components:-

(i) Consumption (C):- Spending by households on goods and services. It is the largest component and depends on disposable income. As income increases consumption generally increases.

(ii) Investment (I) Spending by business on capital goods like machinery and building. It is influenced by interest rates and business expectation about future profitability.

(iii) Government Spending (G): Expenditure by the government on goods and services. This is considered exogenous (decided by policy) and does not depend on foreign goods.

Teacher's Sign.

Assignment - III

Q-6 Explain the reasons for inflation in an economy.

Inflation in a economy occurs due to several reasons. one major cause is demand - pull inflation which happens when aggregate demand exceeds aggregate supply. Another reason is cost-push inflation. caused by raising production cost such as wages and materials. supply chain disruptions, natural disasters or geopolitical tension can be reduce supply. leading to higher prices. Additional excessive money supply due to expansionary monetary policy can fuel inflation. imported inflation occurs when the prices of imported goods rise. Lastly - expectation of future inflation can cause business to increase price in advance further accelerating inflationary trends in the economy.

Q-5

Give a brief account of the instruments of Monetary Policy

- Monetary Policy refers to the Process by which a country's central bank, such as the Reserve Bank of India (RBI) controls the money supply and interest rates to maintain price stability, economic growth, and financial stability. The main instruments of monetary are classified into two categories: Quantitative and Qualitative instruments.

(i) Quantitative instruments (General tools):

These affect the overall supply of money in the economy

- **Repo Rate** :- The Rate at which the central bank lends money to commercial banks. Lowering the Repo Rate encourages borrowing and investment; increasing it controls inflation.
- **Reverse Repo Rate** :- The rate at which the central bank borrows the money from commercial banks. It helps absorb excess liquidity.

Q-10 Write a short note on the demand for money in an economy.

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Demand for money refers to the desire to hold money rather than other assets. In an economy, people demand money for three main reasons: transactions motive (to buy goods and services), precautionary motive (to handle unexpected expenses) and speculative motive (to take advantage of future investment opportunities). The first two depend on income levels, while the speculative motive depends on interest rates. As income rises, transaction and precautionary demand increases. When interest rates are high, people prefer bonds over money, lowering speculative demand. Understanding money demand helps central banks regulate liquidity, control inflation, and ensure overall economic stability and growth.

Combining these, the equilibrium condition becomes

$$Y = C_0 + cY + I_0 - b\alpha + G$$

$$\text{Solving} = Y = (1/1 - c)^{-1} (C_0 + I_0 + G - b\alpha)$$

This equation shows that output (Y) depends negatively on the interest rate (α). Plotting this relationship given the IS curve, which is downward sloping in the (Y, α) space, a lower interest rate encourages more investment raising aggregate demand and output, shifting the equilibrium to higher Y .

Derivation of the LM curve:

The LM curve is derived from the equilibrium in the money market. The money market equilibrium condition is

$$\text{Money supply (M/P)} = \text{Money demand (L)}$$

Money demand depends on income (Y) and interest rate (α)

$$L = L_1 Y - L_2 \alpha \text{ where } L_1 \text{ and } L_2 \text{ are positive constants}$$

substituting into the equilibrium condition

$$M/P = L_1 Y - L_2 \alpha$$

Solving for r :

$$r = (L_1/L_2) Y - (M/P)/L_2$$

This gives the LM curve, which is upward-sloping in the (Y, r) space. Higher income increases money demand, leading to a higher interest rate to maintain equilibrium in the money market.

Equilibrium in IS-LM Model:-

Equilibrium in overall economy occurs at the point where the IS and LM curves intersect. At this point.

- The goods market is in equilibrium (Investment = saving)
- The money market is in equilibrium (Money demand = money supply)
- Both the real sector and monetary sector are simultaneously balanced.

At this intersection, the corresponding values of output (Y) and interest (r) represent the general equilibrium of the economy.

Policy Implications:-

- Fiscal Policy - (changes in G or taxes) shifts the IS curve. For example, an increase in government shifts IS to the right, raising output and interest rates.
- Monetary Policy - (changes in M) shifts the LM curve. An increase in the money supply raises interest rates and increasing output.

Thus, the IS-LM model is a powerful framework to analyze how different policies affect national income and interest rates, ensuring macroeconomic equilibrium.

(iii) Flexibility of Prices and Wages.

Classical economists believed in the flexibility of prices and wages. They argued that in a competitive market, prices and wages are not rigid but adjust to changes in economic conditions. For instance, if there is excess supply of labour, wages will decrease, encouraging firms to hire more workers. Conversely, if there is excess demand for labour, wages will rise, which may reduce the number of workers hired.

Implication for output, Prices, and Employment.

- **Output:** Flexible prices and wages ensure that resources are allocated efficiently, leading to an optimal output. Firms adjust their production based on changes in costs and prices.
- **Prices:** Price flexibility ensures that markets clear, meaning that goods and services are bought and sold at prices that reflect their supply and demand.
- **Employment:** Wage flexibility allows the labour market to clear, meaning that unemployment is temporary and will be resolved as wages adjust.

- Cash Reserve Ratio (CRR): The rate at which the central banks borrow money from commercial banks. It helps absorb excess liquidity.
- Statutory Liquidity Ratio (SLR): The Proportion of deposits banks must maintain in the form of liquid assets. It also controls credit expansion.
- Open market operations (OMO) Buying and selling of government securities in the open market to control liquidity.

(ii) Qualitative instruments (selective tools) :- These are used to control credit for specific purposes.

Credit Rationing :- Limiting the amount of credit available to particular sectors.

Moral Suasion :- The central bank persuades bank to adhere to policy guidelines.

Margin Requirements :- ~~Changing~~ changing the margin on loans to control speculative lending.

Together, these instruments help the central banks regulate inflation control money supply and maintain economic stability.

(V) The Role of Capital Accumulation.

Classical economists recognized the importance of capital accumulation of economic growth. They believed that saving leads to investments, which in turn increases the capital stock and enhances productive capacity. According to classical theory ~~higher~~ higher capital accumulation leads to increased productivity and output, which benefits the overall economy.

Implications for Output, Prices and Employment:

- **Output:** - Increased capital accumulation boosts productivity and output. More capital means efficient production processes and higher levels of output.
- **Prices:** With increased productivity, the cost of production decreases, leading to lower prices for goods and services in the long term.
- **Employment:** - As capital accumulation increases, it can lead to higher levels of employment as new investments create additional job opportunities and enhance worker productivity.

Prices will fall, leading to an increase in quantity demanded and a reduction in supply until equilibrium is restored. Conversely, if there is a shortage of goods, prices will rise, leading to a decrease in quantity demanded and an increase in supply until equilibrium is reestablished.

Implications for Output, Prices and Employment.

- **Output** - The self-regulating nature of markets implies that resources will be allocated efficiently, leading to optimal output levels over time. Production will align with consumer preferences and resource availability.
- **Prices** - Prices are seen as flexible and will adjust to balance supply and demand. This flexibility ensures that markets clear, meaning there are no persistent shortages or surpluses.
- **Employment** - In the classical view, employment adjusts to changes in output and prices. If there is unemployment, wages will fall, leading to an increase in employment as firms hire more workers at lower wages rates.

(ii) Say's Law of Markets

Say's Law, formulated by Jean-Baptiste Say, asserts that "supply creates its own demand". According to this principle, the act of producing goods and services generates income that will be spent on other goods and services thus creating a market for all produced goods. Say's law implies that there cannot be a general overproduction or persistent unemployment because supply and demand are always in balance.

- **Output:-** The law suggests the production will always find a market, thus ensuring that resources are fully utilized and output is maximized.
- **Prices:-** Prices adjust to ensure that supply and demand are balanced. Since production creates its own demand, there should be no long-term price fluctuations due to imbalances.
- **Employment:-** If there is temporary unemployment, it is viewed as a result of short-term adjustments. Say's Law suggests that in the long run, employment will return to its natural level as market forces balance supply and demand.

Investment (I) is assumed to be autonomous and constant in the short run

Equilibrium occurs when:

$$Y = C + I$$

Substituting for C gives

$$Y = C_0 + cY + I$$

solving for Y

$$Y = (1 / (1 - c)) \times (C_0 + I)$$

This equation determines the equilibrium level of output, depending on autonomous consumption, investment, and the MPC.

If actual output is less than AD - firms reduce inventories and increase production raising output. If output exceeds AD, inventories build up, and firms cut production. These adjustments continue until the economy reaches equilibrium.

Importantly - the Keynesian model allows equilibrium at less than full employment meaning government intervention (fiscal policy) may be needed to close recessionary gaps and achieve full employment output.

Q-7 For a three sector economy the following is given:-

$C = 60 + 0.8Y$, $I = 50$, $G = 20$ where C = Consumption
 I = investment and G = Government expenditure
 find out the equilibrium output level

In Three-sector economy, the equilibrium level of output is found when:-

$$Y = C + I + G$$

Given

$$C = 60 + 0.8Y$$

$$I = 50$$

$$G = 20$$

Substitute, the values into equilibrium condition

$$Y = (60 + 0.8Y) + 50 + 20$$

$$Y = 130 + 0.8Y$$

Now, solve for Y :

$$Y - 0.8Y = 130$$

$$0.2Y = 130$$

$$Y = 130 / 0.2 = 650$$

$$\text{Equilibrium } Y = 650$$

Q-9 What type of fiscal Policy the government should adopt during recession, justify your answer.

- During a recession, the government should adopt an expansionary Fiscal Policy to boost economic activity. This involves increasing government spending, reducing taxes, or both. Higher government spending directly raises aggregate demand by creating jobs and income. Lower taxes increase disposable income encouraging consumer spending and investment. Together, these measures stimulate demand, production and employment. Expansionary Fiscal Policy helps close the recessionary gap and steers the economy toward full employment. With such intervention, weak demand may persist, prolonging the recession. Hence expansionary fiscal Policy is justified to revive growth, restore confidence, and reduce unemployment during economic downturn or sluggish periods.